NATIONAL GEOGRAPHIC SOCIETY

# GEOGRAPHIC SCHOOL BULLETINS

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KANSAS—The Wheat State Harvests a Hundred Years

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Then the cattlemen came to stay, covering the plains with "white man's buffalo." Kansas raised a sight of cow critters, and Texas sent more in on the cattle trails. Something new on the face of the earth, the cow town, was born where these trails met westward-pushing railways.

One of the most legendary of these cow towns was Dodge City (left). The eastbound Santa Fe streamliner follows the Santa Fe Trail along the same Front Street where cowboys forgot the hardships of cattle-driving. So exuberant did they become, after visits to the Long Branch and other saloons, that it is said they couldn't hit the floor with their hats in three tries.

Gunplay often followed such fun. Errant cowpokes sometimes found themselves the guests of honor of the local "uplift society," dying of "hemp fever" under a drafty cottonwood. Next morning Boot Hill Cemetery—populated with good men and bad who had died with their boots on—had a fresh grave for the marshal to philosophize over.

Townspeople were natural enemies to the range riders, even as were the sodbusters, or farm settlers, who were coming in from the East. Hard-dealing shopkeepers especially earned the cowboys' derision, being called "paper-collar Comanches."

As dirt farmers and "pig lovers" poured in to homestead their 160 acres per family, the epic of the cowboy died and modern Kansas was born. The concerns of Dodge City's citizens today are much the same as those of Vineland, New Jersey, or Corvallis, Oregon.

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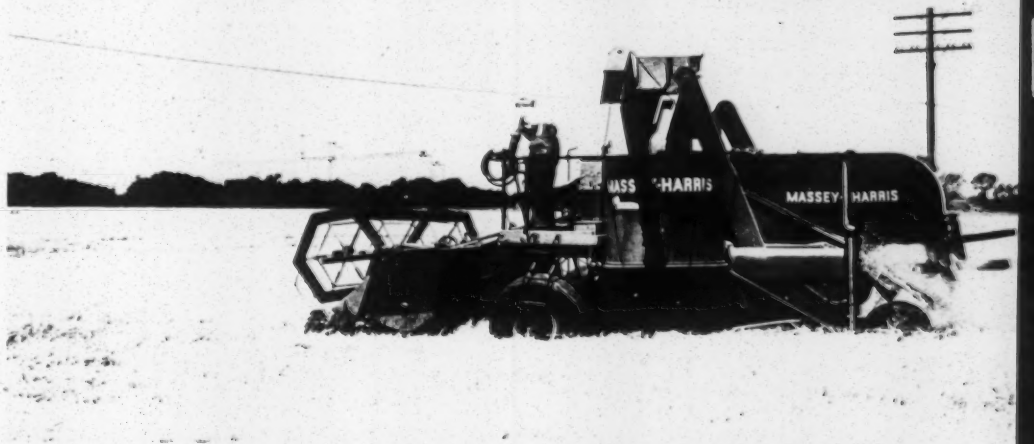
Temples of the new order are wheat elevators of convoluted concrete. They rise to the left of the tracks in Dodge City and, near Salina (below), in the vast wheatlands beside the Smoky Hill Trail.

To Kansans in 1961 these heritages come readily to mind as they commemorate 100 years of statehood. On January 29, 1861, in the weeks before the Civil War started, Kansas—already bloodied by issues soon to be fought on a national scale—joined the Union.

No state suffered more in being born than did Kansas. The 33 states that had already

RALPH GRAY, NATIONAL GEOGRAPHIC STAFF

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DON RICHARDS, KANSAS INDUSTRIAL DEVELOPMENT COMMISSION. COVER, NATIONAL GEOGRAPHIC PHOTOGRAPHER DEAN CONGER

*A CENTURY OF*

# KANSAS

ONCE PAUL BUNYAN got disgusted with logging and tried to take up farming. He hitched Babe, his blue ox, to a giant plow. Her unruly furrows became the Mississippi and Missouri Rivers. The plow caught under the corner of Kansas and flipped it over—which is why it is flat and bare.

When real farmers got to Kansas they had no such troubles. They found the plains ideal for growing wheat (see cover). Today Kansas leads all states in harvesting an annual crop of Paul Bunyan proportions.

Before the farmers came with their seed wheat and fences, Indians roved in easy pursuit of buffalo. The white men at first were looking for other things in other places. Gold-seeking explorers came and went. Trappers pushed through, leaving the hollows of Kentucky for the heights of the Rockies.

Emigrants on the Oregon Trail, smelling good land in a small valley 2,000 miles away, had no eyes for the limitless promise of prairie loam under their covered-wagon wheels. Traders on the Santa Fe Trail (pages 318-19) had no thoughts for Kansas but that its chary streams would keep oxen and men alive until they reached the fleshpots of the Rio Grande.

The white buffalo hunters stayed long enough to perform their slaughter, leaving little for the "people of the south wind"—the Kansa Indians—except the south wind.

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on farms—one of the highest rural population percentages in the United States.

Let's travel across Kansas and see the Jayhawker State—all 400 miles long of it. Will it be as flat and bare as when Paul Bunyan accidentally turned it over? Not at all. In fact, beginning at Kansas City, Kansas, the largest city, and going west through Lawrence to Topeka, a New Englander would feel at home among the hills and trees and pretty towns.

PHOTOGRAPHS BY RALPH GRAY, NATIONAL GEOGRAPHIC STAFF

In Lawrence, rambling the hilly campus of the University of Kansas, you can imagine yourself in a New England college town. Then you learn that the Oregon Trail went through these hills and you realize you're in Kansas. The new campanile (far left) is today's most striking campus landmark, a memorial to World War II dead.

Continuing west of Topeka, you're suddenly in the Flint Hills, a treeless rolling prairie covered by bluestem grass and red Herefords. The one at upper left is a prize example being exhibited by its owner at a Topeka fair.

Changeable Kansas next presents the golden wheat belt which stretches from Nebraska to the Oklahoma border. Wheat is grown in all parts of the state, but this central region produces the most.

Going west, the wheat becomes thinner, the land higher, rain scarcer, and wood nearly nonexistent. Early settlers began using stone for fence posts, many of which are still in use (left). Soft when quarried, this limestone is easily cut.

Then comes an oil field and finally the high plains reach into Colorado. Here the cattlemen still are at home on the range. They meet in their V-8's on the highway and recall the old days when cattle spreads were so big that the wagon had to be greased twice to get to the front gate. R.G.

**State employees** walk home in Topeka. The growing force of government workers overflows the Capitol and spills into the new State Office Building (right).

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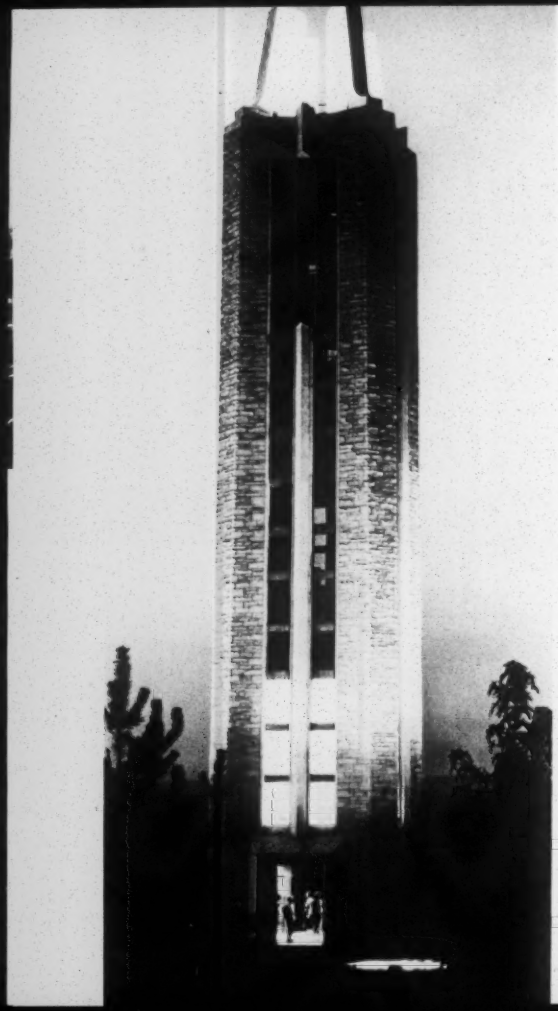

entered the Union were definitely slave or free by tradition. The Missouri Compromise of 1820 had provided that all territory north of Missouri's southern border (except Missouri) would be free. But in 1854 proslavery forces in Congress succeeded in passing the Kansas-Nebraska Act which said that each territory's settlers should determine whether they wanted to become a slaveholding state or a free state.

For six years Kansas was a battleground. A man's beliefs, or suspected beliefs, could cause his death, and a knock on a cabin door at night was a sound of terror. Proslavery and antislavery groups each hoped to become strong enough to determine the question in its favor.

The New England Emigrant Aid Company established the Free State (or Jayhawker) stronghold of Lawrence, while scattered proslavery men were directed largely by David Atchison of Missouri. "Settlers" from Missouri voted in the first elections, in 1855, in such large numbers that the slavery forces won.

The Free Staters set up a rival government which they claimed represented the majority of true Kansans, but the United States could not recognize it. A proslavery army burned and sacked Lawrence, killing several Free Staters. In retaliation, John Brown of Osawatomie gathered his band

NATIONAL GEOGRAPHIC PHOTOGRAPHER DEAN CONGER

of rabid abolitionists and killed five proslavery men.

"Bleeding Kansas" was now a national problem. Federal troops came in to ease tension. The territory rejected a proslave constitution in 1858 and approved one prohibiting slavery in 1859. Topeka became the capital.

The 1860 census gave Kansas a population of 107,206. By 1960 it had jumped to 2,000,000. Nearly half of all Kansans live

come the Trail in 1541, half a century before the first English settlers stepped ashore in Virginia. Sixty years later an ambitious Spanish expedition swept into the New Mexico region to establish a colony. Santa Fe was founded in 1609.

Most Americans were blissfully unaware of the lands beyond the Mississippi. In 1803, however, the Louisiana Purchase was negotiated with Napoleon. The nation's pulse quickened; its people faced west.

An occasional pack train reached Santa Fe. But it was not until 1822 that William Becknell blazed the pioneer wagon route across prairie, high plains, mountains, and desert. At Santa Fe, his goods sold at an exciting profit. He was back home in 48 days.

After that, the longest wagon trains the world has ever seen creaked to and fro on the Trail. Mexico, newly freed from Spain, was hungry for American calico, guns, tools, and shoes. The traders were just as hungry for silver, furs, wool, and mules.

The Trail had three terminals in Missouri —first Franklin, then Independence, and Westport. It ran southwesterly across Kansas. Past Fort Dodge, wagons could take one of two routes. The longer but better-watered followed the Arkansas River into Colorado and crossed the difficult Raton Pass into New Mexico. The shorter and far more dangerous path, the Cimarron Cutoff, struck out across desert. Travelers measured the hundreds of miles by Indian attacks, hunger, thirst, hot sand, mud, stubborn rocks, quicksand, and violent storms. Santa Fe was the pot of gold at the end of a long, rugged rainbow.

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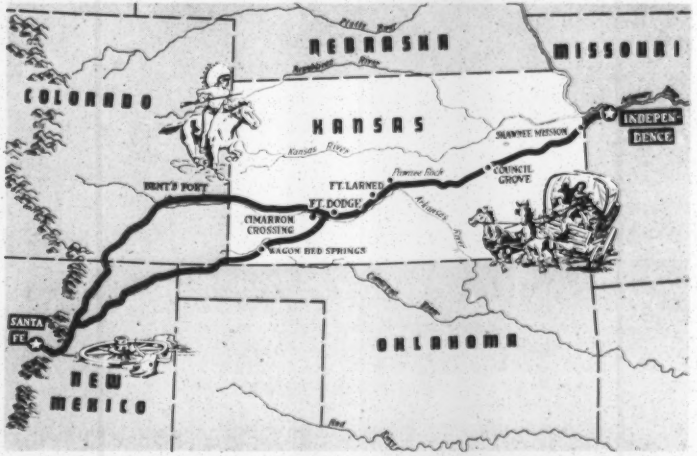
# *The Santa Fe Trail*

FOURSCORE YEARS AGO wagons stopped rolling on the Santa Fe Trail, a highroad of empire that helped ensure that the United States would become as wide as its continent.

On February 9, 1880, iron rails reached the old Spanish town of Santa Fe, and America's major commercial highway was obsolete.

But traces remain of the 780-mile path from western Missouri into




ILLUSTRATIONS FROM KANSAS INDUSTRIAL DEVELOPMENT COMMISSION

New Mexico. In places dark ruts still etch the plains. In the photograph at right, they can be seen crossing a later, winding canal near an arrow-straight modern highway 9 miles west of Dodge City (old Fort Dodge).

Bullwhackers and pioneers rode great wagon trains, like that forming in the historic picture at left taken at Great Bend, Kansas, in 1872. They would still recognize landmarks and the few scattered forts that offered some protection against Indians.

Next month a caravan of prairie schooners, costumed scouts, and Indians will re-enact the great days of the Trail. The cavalcade will move on highways 56 and 85, which follow the Trail for 800 miles across four states.

A Spaniard, Coronado, kicked up dust on what was to be-

Spirits and supernatural powers populate the worlds of these primitive people. The Bantu of Africa hold that spirits live in springs, rivers, lakes, rocks, caves, hills.

The Pueblo Indians of Arizona and New Mexico worship a pantheon of major gods and a multitude of spirits of lower rank. They call these spirits Kachinas—from Hopi words meaning father of life. The Pueblo believe that man's life and blessings—the cycle of seasons, rain, and crops—are gifts of Kachinas.

Hopi Kachinas live in the snow and ice of the San Francisco Peaks near Flagstaff, Arizona. But at festival times, borrowing the bodies of living men, they visit villages to distribute presents and receive prayers to the gods. The masked dancer at far left brings melons and corn as gifts of the gods.

Primitive people have devised many ways to keep the gods on their side. Ceremonies to appease the unseen powers govern their lives from birth to death. The Australian aborigine's prayer for rain is a ritual of sucking a fragment of pearl shell, then spitting it, full of the "essence" of water, toward the sky.

Fiji Islanders show their immunity to fire by walking through it barefoot. The Mbengga tribesmen (right) turn and stir the white-hot rocks with poles before filing across them. Legend says an ancient chief of a certain clan rescued a god from a pool of deep water and the god gave the chief and his descendants this privilege.

LONDON NEWS AGENCY PHOTOS, LTD.

The Navajo medicine man cures by faith, intoning chants over a sick girl seated on a holy sand painting designed to attract the attention of the gods.

Primitive men wear fetishes—charms thought to be imbued with supernatural power—around their necks or hang them in homes to protect against evil fortune. Masks protect from demons—the wooden mask in the picture above left, decorated with shells and feathers, belonged to a New Guinea witch doctor.

Things, people, and places too sacred to be approached, are marked off as "taboo."

Many of these practices have carried over, in greater or lesser degree, to more developed faiths. L.B.



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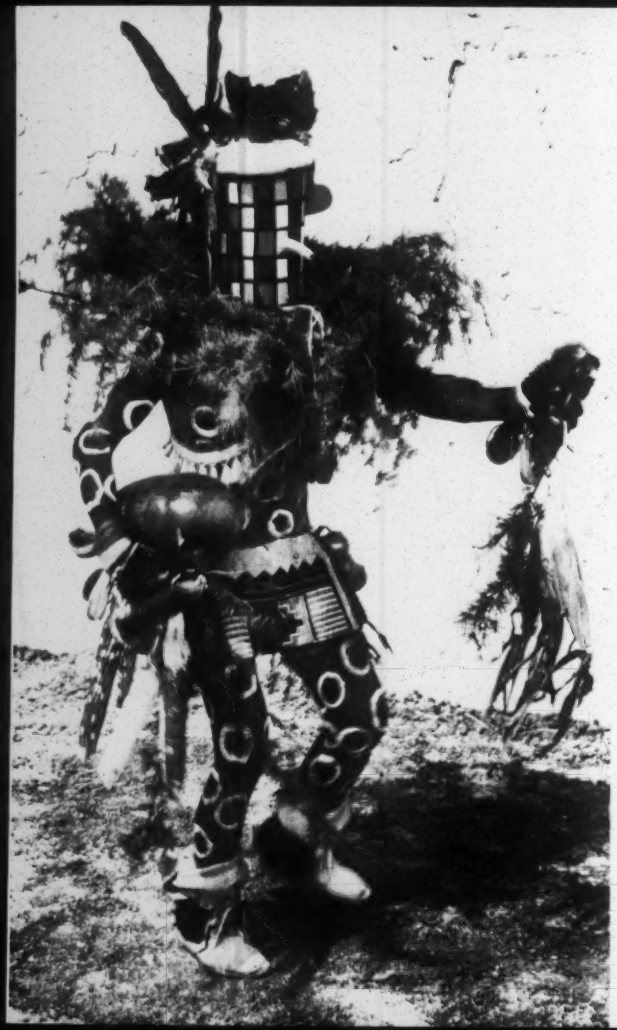




# PRIMITIVE

E. THOMAS GILLIARD, ABOVE, AND PAUL COZE

WHEN MAN FIRST appeared on Earth, an awesome spectacle confronted him: A sky sometimes ruled by bright sunshine or life-giving rain, at other times an immensity of blackness. Lightning stabbed and thunder roared.

Rivers cooled the skin of a man tired from the hunt, but rivers also swept men to death.

Man trembled before boons and cataclysms he could neither control nor predict. He concluded that something he did not understand ruled the universe.

So he explained to himself as best he could the world he had to live in. He filled it with spirits and supernatural powers. He devised ceremonies to influence these spirits, to keep them on his side and grant him continued life, good hunting, and crops.

Early man was as confounded by his own body as he was by his mysterious environment. He could not understand why, when he lay down on the soft earth and closed his eyes, dreams lifted him into another incomprehensible world. Yet his body retained life. At another time, however, a man lay down, closed his eyes, and never opened them again.

So early man concluded his body was only a temporary home for a spirit, a soul. This soul lived on after the body died. Invisible, it took on an aura of power which also could bring good fortune or disaster and thus must be appeased.

These ancient ideas live on today in many places: in the jungles of Africa and South America, the deserts of Australia and southwest Africa, remote Pacific islands, the Indian dwellings of the American Southwest, and the igloos of the North.

Today some 113,000,000 people follow primitive religions, which vary from group to group and place to place, yet have aspects in common.

metal tools, manage to hew these mighty boulders, move them 24 miles from the Marlborough Downs, and set them upright in the earth?

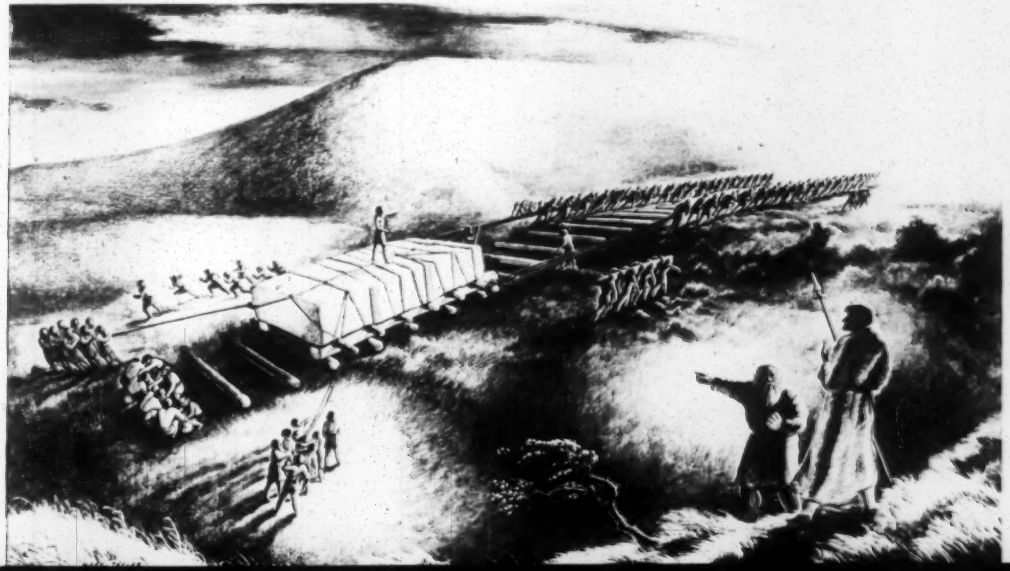
The painting below shows one likely method of transportation. It depicts an afternoon 3,400 years ago, when sweating men inch a 40-ton sarsen up a hill. The block rides a cradle resting on oak logs, used as rollers. Strong-backed teams move the logs to the front after the stone has passed, making an endless track.

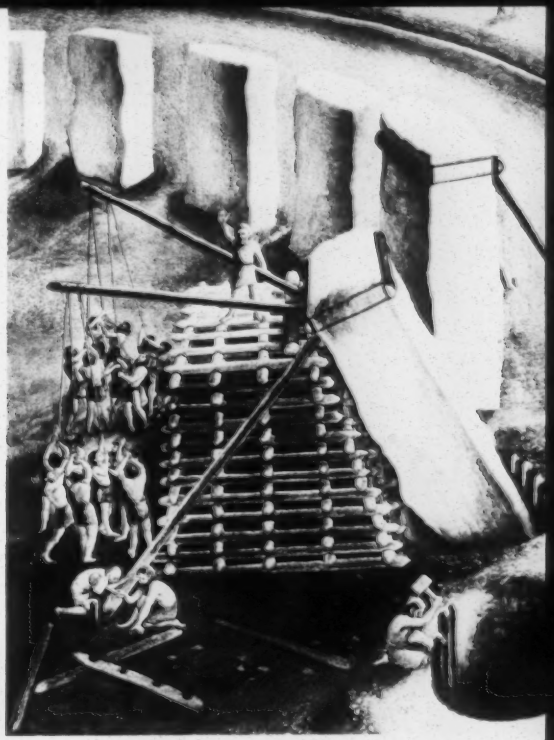
Two hauling teams tug the load while two smaller groups at the rear prevent it from slipping sideways.

At right a stone is placed in the circle. First it was moved on rollers so that one end hung over a hole. Then, as muscle power pried it slowly higher, a log crib was built under it. After a final push the stone toppled in the hole.

The sarsens were named, apparently, from "Saracen," a term applied in post-crusading times to anything heathenish.

PAINTINGS BY BRIAN HOPE-TAYLOR





**Strength against stone:** These paintings show how modern researchers believe the builders of Stonehenge constructed their unique monument. Even with plenty of man power and unlimited time it was a stupendous engineering and building job.



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# STONEHENGE
## A Mystery Ringed in Rock

W. E. ROSCHER

**Like abandoned** blocks in a giant's nursery, the rocks of Stonehenge stand on England's Salisbury Plain. The ruts of an ancient ceremonial pathway lead off to the left, then turn toward the Avon River 1¾ miles away. Beside the highway stands the Heel Stone. Between it and the central group lies the toppled, so-called Slaughter Stone. A wide earthwork circle surrounds a ring of chalk-filled ritual pits. The section of the central arc in upper left, with its cap stones still in place, shows how the whole ring looked centuries ago. Within stood five massive groups of three stones each, and another ring and horseshoe of smaller stones, the Welsh bluestones.

Solitary on the green plain rear the rough-cut boulders, a 4,000-year-old question mark.

Although modern men have delved and studied this colossal work of the ancients, the huddle of great rocks called Stonehenge (place of the "hanging stones"), they have constantly barked their mental shins on the central mystery: "What is it?"

"We can reckon when it was built and how; we can make learned guesses about its architects; but of its purpose and use through the dark centuries we may remain forever uncertain," writes Harold E. Edgerton in the *National Geographic Magazine* (June 1960).

There are many clues, but no solution, and there may never be. Some believe Stonehenge was designed for sun worship; others scoff at the idea. Some think it may originally have had a roof which housed a council chamber or royal court. Others believe it a burial place.

Whatever the purpose, it must have been compelling—Stonehenge represents a whale of a lot of hard work. It has been estimated that as many as 1,500 men could have labored ten years just to move the largest stones, the so-called sarsens, to the site.

How did a Stone Age people, without

The gray sandstone slabs are harder than granite; they quickly dull modern tools, even steel-alloy chisels. How did a Stone Age people manage to shape them?

Probably with fire and water. Heating the stone, then quickly quenching it with cold water should, with luck, crack the boulder along the water line. Finer forming required almost endless banging of the slab with stone mauls. In all, the construction took some 400 years.

The belief that Stonehenge was built by sun worshipers grows from the fact that on the first day of summer, June 22 (in some years, June 21), the sun rises in such a position that its first rays pass directly over the Heel Stone to light the central Altar Stone. Each year on this day hundreds of persons come to Stonehenge to watch this happen. In the picture above, the sun's disk is centered over the Heel Stone. Usually the crowds are disappointed, since clouds and mist regularly obscure the sunrise. *National Geographic* photographers were on hand for six years before a clear dawn made the picture possible.

One theory about the brooding ruin is that it was a Druid temple (even though Stonehenge was hundreds of years old before the first Druid could have prayed there).

On June 22 each year, modern "Druids," gowned and hooded, come to Stonehenge to celebrate their mystic rites. They salute (below) symbols of fire, air, earth, and sea.

These men are certain they have the answer to the rock riddle; others, with opposite views, are just as certain. The only sure reply to the stone question seems to be: "We do not know—and we are not likely to find out."

F.S.



THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF